GOLDEN EAGLE.

RB64163

NATURE CARED FOR

AND

NATURE UNCARED FOR:

The Result upon the Hearts of Men.

A

LECTURE ON ORNITHOLOGY,

DELIVERED AT

THE WALTON MISSION ROOM,

ON FRIDAY, FEB. 21ST, 1879.

BY

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1879.

Dedicated to the Memory

OF THE LATE

CELEBRATED NATURALIST,

CHARLES WATERTON,

WHOSE

EXAMPLE AS A PROTECTOR AND OBSERVER

OF NATURE IN LIFE

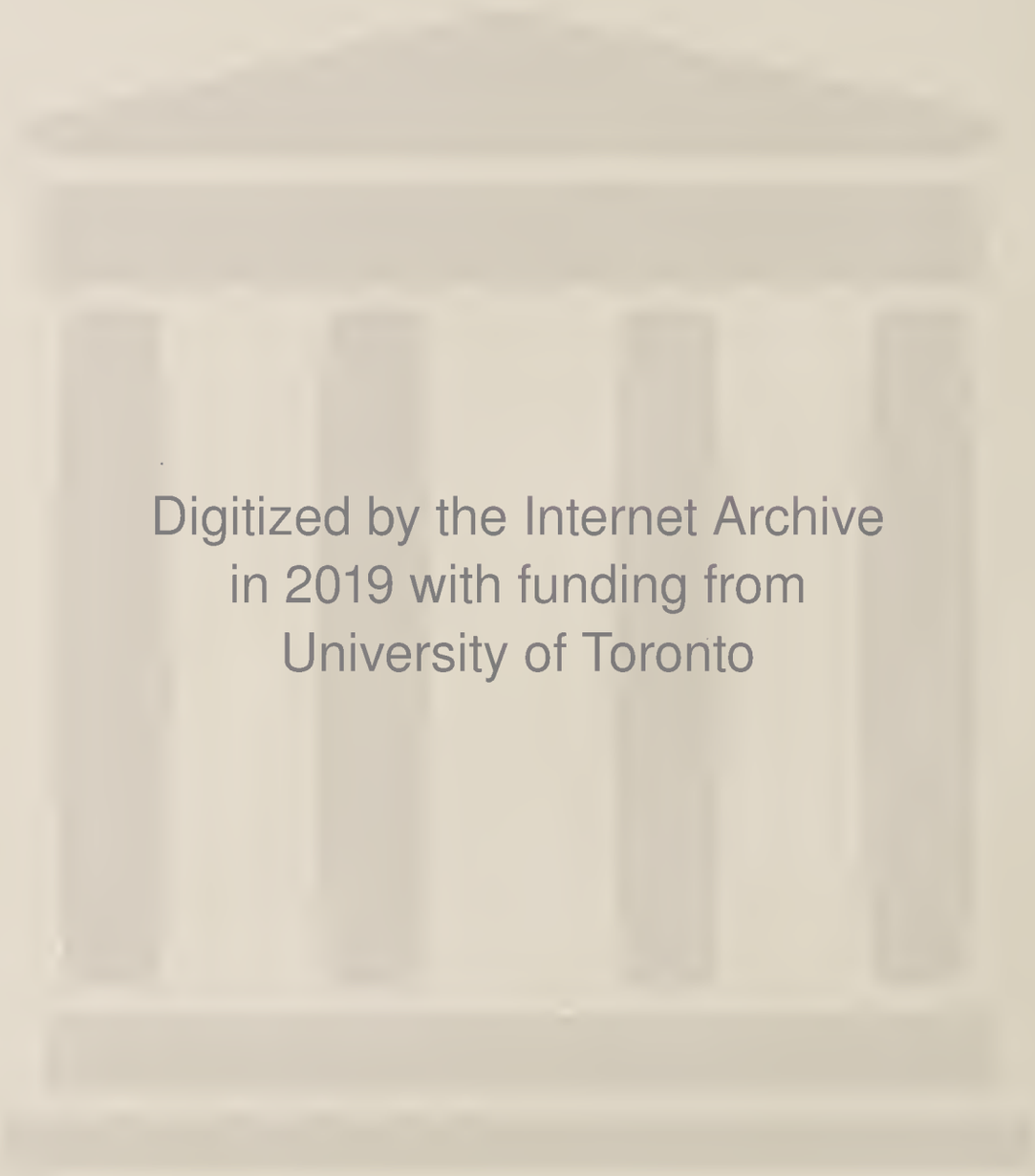
SHOULD BE

FOLLOWED BY EVERY TRUE LOVER

OF THE

MARVELLOUS WORKS OF

THE CREATOR.



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PREFACE.

My object in printing this Lecture is to endeavour to impress my readers with the feeling that, without considering themselves deserving of the title of *naturalists*, they may, by the simple observation of any and every feature in the ever-variable face of nature, purify their hearts and minds, and combine enjoyment with instruction. I am particularly anxious to see more of the true "Gilbert White" kind of naturalist than at present exists; which, from the tendency of the age, seems less than ever likely to exist, judging from the fact that Natural History education too often commences with the *anatomy of a dead animal*, rather than study of *the life-sympathies and instincts of the object in life.* This is a deep subject, which

the limited space here will not allow me to develop, but only to throw out a hint to be carefully thought over at leisure. The illustration of the eagle is admirably drawn on stone by my artist brother-in-law, Mr. Stanley Inchbold, adapted from the woodcut of a golden eagle contained in John's "British Birds and their Haunts," a specimen of one of Mr. Joseph Wolf's inimitable sketches of bird-life. The latter illustrations are drawn from Bewick's celebrated woodcuts of the swallow and hedge-sparrow, with absolute fidelity and care, and greatly add to the interest and value of the Lecture as artistic illustrations of the ideas I have endeavoured to convey.

H. B. H.

10, HANOVER SQUARE, LEEDS,
March, 1879.

NATURE CARED FOR

AND

NATURE UNCARED FOR:

"Books! 'tis a dull and endless strife!
Come, hear the woodland linnet;
How sweet his music—on my life
There's more of wisdom in it.
And hark how blithe the throstle sings,
He, too, is no mean preacher;
Come forth into the light of things,
Let Nature be your teacher."

—WORDSWORTH.

IT is now some ten days since it was kindly suggested to me that I should come over to Walton, and give you a lecture upon Natural History, with special reference to the interesting subject of bird-life, as it is, and as it ought to be studied by our enquiring youth.

The subject appeared to me to be happily chosen; for how could we better occupy one short hour this evening, than by taking the life history of several birds, following them in their daily life, considering their modes of existence, and their instinctive motives for migration and nest-building at regular ordained

periods of the year. There however appeared to me to be yet another strong reason why we should choose this subject of "Bird Life" for a lecture at Walton. Throughout Europe and America—I may say throughout the civilised world—there is not a naturalist (however small may be his pretensions to such a title) who has not heard much of, and learnt much from, the pen of your late celebrated naturalist and squire, Charles Waterton. The very atmosphere of Walton, therefore, suggests the feeling that its inhabitants, following the striking example left by Waterton, should know and think something more than others of the study of Ornithology, that is, the science relating to birds. I do not come here this evening with the intention of telling you anything that is new or striking, but I wish to make an effort to strike a small spark of admiration in you for the wonderful works of Nature around you.

In this our time we are too apt to run after what is new—*novel*, as we choose to call it—*new* is too *old* a word.

We are not satisfied to read the book of Nature before us as it stands in its life and beauty, but rather to dig up and explore its rotten, decayed leaves, moulded with the damp of time, or crushed to decay in the sequence of ages.

One hope, then, that I have set before me is to

endeavour to engraft in your minds some sprig of feeling for what lives with you and around, a true love for some branch of Nature's vine, from its root to its tendrils, some searching for knowledge of existing forms, such as the natural inclinations of your own minds—hearts I would rather have it—tend to guide you to. I do not wish to cross the path of one who loves flowers, because I speak of birds, or insects, or fishes, stones, mosses, or what not; but I wish to make it very clear to you this evening that your love for Nature will be best shown by your protection of her, not, as I fear it is sometimes only shown, in the destruction of her. Our lovers of birds shoot them because they wish it to be clearly understood that they love and admire them. This is not the true study of Natural History.

True it is that specimens must be obtained for collections of objects of Natural History, but those required for this honest purpose only would make up a very small proportion of the sum of the destroyed.

The destruction of animal life arises from wanton, purposeless Natural History—the aimless wandering on an unknown path.

I hope that this evening you may resolve that your aim may be true, and that, whatever path of Nature you may choose to tread—though it may have been well trodden of old—yet it will disclose the oft-

repeated beauties of the hidden wonders of Nature, all new to you, it may be, all unexplored.

The three birds whose lives I have selected may appear at first sight to be connected by no tie save that of having wings and laying eggs. This is my very reason for choosing them for a lecture like this, when time will not permit of the lives of a number of birds being taken in the sequence of their natural orders, and described. So that it appeared wiser to choose those whose opposite natures would bring out the individual character of each with greater prominence.

Probably very few of you have ever seen an eagle, a golden eagle, wild, in a state of nature. Probably there are very few of those present but have a very good idea of the general appearance of this noble bird, and have possibly allowed their imagination to lead them to its mountain home, where I will ask you to follow me to-night.

From time immemorial the golden eagle has been taken as the type of the king of birds, from his majestic flight, power, and noble associations. For the benefit of those who are not acquainted with this bird, some slight description seems necessary.

The golden eagle stands at the head of the list of raptores, or snatchers, so called from the habit they have of dashing at their prey from a height, and

snatching it with their talons in the swoop. A male golden eagle stands about three feet in height. The female is rather larger and more powerfully built in the eagle tribe, as well as in the rest of the hawk and falcon species, from the fact that the defence and maintenance of the young birds chiefly falls to the lot of the female. The general colour of a mature golden eagle is dark brown; the longest and strongest feathers in the wings are black. The head is of a tawny shade, covered by beautifully-pointed feathers. This tawny shade extends slightly down the neck at the back. The wings when closed stand off from the bird's sides, and show off its massive shoulders and broad back as it stands erect.

These wings, whose expanse is usually about seven feet from tip to tip, suggest the immense powers of flight of which the bird is capable. Sometimes wheeling in immense circles around the mountain top, whose crest is clad from year to year by perpetual snow, with wings outstretched, no movement can be seen, save that onward gliding impulse, gained as if from its inward intention, merely willing it upward, perfect master of the vast expanse of air above and air below. It is watched with straining eye, a speck in the vault of heaven, thousands of feet in the air; this bird is gifted with marvellous sight—"with an eagle eye," as the proverb has it—

which can discern the smallest of its prey when poised upon its wings sailing far away in the sea of air above us.

The eye of the eagle is protected by a projecting brow, which acts as a shade from the rays of the sun, which would otherwise greatly interfere with the bird's vision at such exposed heights.

The beak and claw give, however, upon nearer acquaintance, that powerful appearance, which, together with the eagle's frown, suggest the eagle's real character. The upper portion of the beak is very strong, and armed by a hooked extremity, turned downwards at a sharp angle, and pointed. With this the bird is able to tear its prey into morsels before eating it, which it does by standing upon the animal, or bird, with the talons of both feet deeply grasped into its flesh, while the meat is torn off from between its feet.

The feet are armed with these powerful talons I have just mentioned, which curve and point inwards, about one inch and three-quarters in length, strong at the base and tapering to a point. Woe to the grouse, rabbit, mountain hare, or lamb which the eagle has singled out for her prey.

Her Majesty the Queen has, I understand, a brood of eagles on her royal estates in Scotland every year, where they remain in protected peace, fit occupants

of the frowning mountain's brow and the regal crags. Imagine yourselves in a district in the Highlands of Scotland, where, I am glad to say, many an eagle yet remains to add to the grandeur of the scene.

A high granite peak towers above the rest of the hills, now wrapt in its cloak of mist, now gleaming and sparkling in the sun. Upon such points as these the eagles love to sit, scanning from their watch-tower the plain below, where the unsuspecting game frolics in fancied security in the morning air. The eagle is motionless as the rock on which she rests, watching the careless lamb or timid hare which nibbles and listens, again pricks his wary ears, and, again nibbling, skips and plays. The grouse cackle to each other as they take short flights before commencing their early meal, and all nature seems to rest safely on its unbroken peace.

But see what a change has come over the scene. In another moment the hare stops feeding, and with a bound disappears into the nearest fern brake; the birds cease their singing, and the grouse their calling. Every rabbit has disappeared, as if by magic, from off that peaceful plain; the lambs run bleating to their mothers, and the mothers bleat for their lambs; but one lamb has strayed too far from the dam to retrace its steps; the eagle has marked her quarry; with a loud screech and an eagle bark, she dives from

her pinnacle into the abyss below; with quick glance—lightning-like—she cleaves the air in her swoop, descending hundreds of feet with half-closed wings and unerring aim, she clutches the lamb, which is borne high into the air with the speed, and carried away to feed a brood of eaglets in her nest upon the mountain precipice.

> "He clasps the crag with hooked hands;
> Close to the sun in lonely lands,
> Ringed with the azure world, he stands.
> The wrinkled sea beneath him crawls;
> He watches from his mountain walls,
> And like a thunderbolt he falls."—TENNYSON.

Sometimes eagles do not take their game in the way just described, but finding a grown-up sheep feeding on the edge of some perpendicular crag, the pair attack it, and by constantly worrying it, drive it over the edge, to feed upon its shattered carcase in the depths below. Eagles pair for life-time, and usually occupy the same mountain year after year, choosing different places for their eyrie each year; sometimes on inaccessible crags, near the top; at other times they select a place to which a person can safely walk. The birds generally repair all the old nests in the neighbourhood before fixing finally upon the one in which they intend to lay their eggs. This is supposed to be regulated by the direction of the wind at the time when the female is about to lay her eggs, usually

about the end of March—a rather breezy time of the year on the mountains, as well as elsewhere. Some mountaineers suggest that the eagles select the nest which contains the fewest fleas, which are the same kind as those hopping nuisances, the recollection of whose midnight deeds will at once creep into every-one's mind. Others, again, assert that the martin cat frequently takes possession of the nest, and remains, by dint of spitting and scratching, the undisputed owner.

The eagle's nest, or eyrie, is a large structure of sticks—some are fully one inch in thickness—placed upon some ledge, frequently where it is protected from above by an overhanging cliff. The nest is sometimes placed in a cave, but wherever situated it is of immense size and strength—generally six or seven feet across—and so firm that it does not give way under a man's weight. The central depression, which contains the eggs, is shallow, and lined as a rule with a peculiar mountain grass, which very much resembles the dead dried leaf tops of a pineapple. In this depression the eggs are laid at intervals of some days. Sometimes the eagle only lays one egg, but two or three are the usual number, although I believe that never more than two eaglets are hatched. The eggs are large, and vary considerably. Some are pure white, others are slightly marked by reddish-

brown at the larger end; but the more strongly marked specimens are dashed or speckled, blotched, or smeared with deep blood-like spots, relieved on the white ground by a purply shade. It may not be out of place to read you the account given by the late Mr. Woolley of his personal adventures whilst obtaining a nest and eggs of the golden eagle in Sutherland, where they breed annually. I will, with your permission, give the following account in his own words ("Ootheca Wolleyana," page 16):—

"We started from the inn with two men carrying the sixty-fathom ropes which I had had made in the town. We rested at a place where the foreman was anxious to get rid of eagles, and sent for the shepherd, at whose house we had been the day before, and who was to follow us. We heard many different accounts—how that the foxhunter killed one eagle a few weeks ago, &c. Some were willing to mislead us, others not so, but all agreed that the nest was inaccessible.

"We reached the crag after a walk of some eight or nine miles from the village. It is a very high cliff, overhanging a large loch of the same name. A small birch wood slopes from it to the water. We saw an eagle fly, and settle again at the top of the cliff. Arrived at the shepherd's house, he agreed to come with us, and his son was to show us the nest; but afterwards the old fellow turned coward, and would not come near the edge. Having returned under guidance of the shepherd's son to where we saw the eagle, I made out the nest with the help of my glass, but I could not point it out exactly to my companion. However, he was to remain below with the boy, to signal to me where it

was. Having reached the top in about half-an-hour, I tied myself to the thick rope, and proceeded, gun in hand, over a ledge to an undercliff of from ten to twenty feet wide, along which I walked some forty or fifty yards. I leaned over the edge, and saw the sticks of the nest some little distance to my right. I got up, shouted, and made all the noise I could, but no eagle came out. I saw one soaring silently at a great height. I had been led to believe that there was only one bird belonging to the nest; so, after all the noise I had made, I took it for granted that this was the one. I shouted for the little rope, and tied a stone and a piece of white paper to it, for my companion to signal when it was opposite the nest. However, I found afterwards that he could not distinguish it. I could only just make him out to be waving his cap, he was so far below. No sooner was the stone over the edge of the rock than out dashed an eagle close to me, within five yards, and with one low cry of alarm flew away to the right, down the valley. Evidently a mountain eagle, as the shepherds had all called it (it looked rather "ring-tailed"): I was not altogether sorry at having laid aside my gun.

"All was now finally planned. The men wisely thought it would be better to have the stake driven and everything done upon the ledge. The shepherd, being an old man, did not dare come down. After a little difficulty (for there was no depth of soil), we fixed the big stake firmly above a very steep slope, some yards from the edge of the rock; then a stake for the little rope twenty yards to the left of us. Having spliced the rope to the stake upon which I was to sit, and tied myself in, explained all to the men, and agreed upon the signals, I proceeded over the edge, which, to my horror, I found almost as sharp as a knife, being a kind of mica-schist. I now felt how stupid I had been in forgetting to bring the leathern tubes I had had made; for the sharp

edge, besides wearing the rope, caused great friction and difficulty in hauling up. No sooner was I over the rock, with the little rope in my right hand, than I saw the nest, with two eggs, beautiful, and very different from each other, about five feet to my left as I faced the rock. I could just reach the ledge with my fingers and unshod toes, and so, having cried 'Stop,' I hung, with the rope bearing me backwards towards the abyss, in a position both cramping from the muscular exertion required, and highly nervo-excitory from the feeling of danger or insecurity, unfounded though it might have been. On looking at the eggs in the nest I at once saw a hole in one, as if the old bird had dug her claw into it in her hurry; but on further examination I found it had a young one in it just hatching, and giving vent to low cries, which accounted for the high state of 'closking' in which I had found the mother. I reached the eggs and put them in the box with tow, which I had lashed under my right arm, and I put some of the lining of the nest in my pocket. It was very large, something like a rook's highly magnified, and lined with a kind of *Luzula*, much of it quite green, and apparently recently placed around: the middle was dried up.* About six feet to my left, and with the embankment of sticks continued to it, was another platform with fresh stuff on it—perhaps a nest of last year, or a roosting-place for the other bird. Ten or twelve yards to the right, and not exactly on the same ledge, was another old nest. A few white feathers (ptarmigans') and white fur (mountain hares') were all the remnants of prey that I saw."

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* "This *Luzula*, which I believe to be *L. sylvatica*, grows plentifully on the damp mountain-sides and ledges of rocks. The eagles pluck and use the whole plant, which is something like the top of a pine-apple; and when dry, the leaves remind one of Russian matting; but they are not long, as in specimens gathered in woods."

So far, then, we have followed out the eagle's habits almost as fully as time will allow.

After the young are hatched, they remain in the nest, and are catered for liberally by both the parent birds until they are fully able to fly. The old birds then take them and give them lessons in hunting and fending for themselves.

This training is highly necessary, since it is the habit of all large birds of prey to drive the young ones from the immediate neighbourhood of the nest in which they had been brought up. This is evidently a wise provision of nature, else certain districts would soon become overcrowded by these destructive birds, and whereas a certain area of land would provide food enough when tenanted by one pair only, there would soon be a scarcity if the young of each year were allowed to remain to breed. It is probable that the golden eagle does not fix upon a breeding place until it has attained the age of seven years. It is not possible to assert this as an absolute fact, but many naturalists of note have observed that immature birds of a considerable age are found evidently wandering about without a home; and it generally happens that if an eagle has been shot or trapped in a district where eagles are unknown, the specimen has proved to be a young bird.

The eagle inhabits most of the highly mountainous

districts in Europe and North America. If one of a pair is destroyed, the remaining bird generally secures a mate within a month's time, but the pair thus united do not breed until the following spring. I have, I think, now said enough about the eagle to show you that, as the lion, from his general character and noble bearing, holds the title of "king of beasts," so the eagle, as the inhabitant of rocky dens and mountain strongholds equally merits the same position as "king of birds." The Prophet Job describes with great force the habits of the eagle. In the 39th chapter of the book of Job, commencing at the 27th verse, he says :—

"Doth the eagle* mount up at Thy command, and make her nest on high?

"She dwelleth and abideth on the rock, and the strong place.

"From thence she seeketh the prey, and her eyes behold afar off.

"Her young ones also suck up blood, and where the slain are, there is she."

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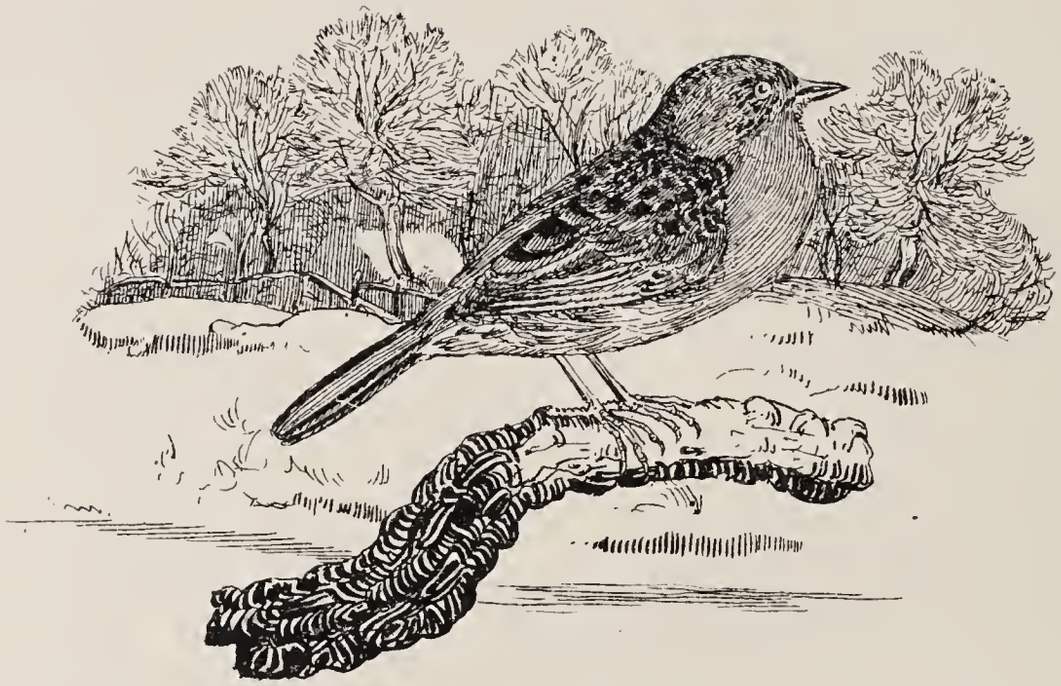
* Canon Tristram has described (*Ibis* 1865, p. 264) two extensive colonies of Griffon Vulture in the cliffs near Mount Carmel, and in his "Natural History of the Bible" he states that there can be no doubt of the identity of the Hebrew word *Nesher*—invariably rendered "eagle" by the translators of our accepted version—with the Arabic *Nisser*, the modern name of this species of vulture.



HEDGE SPARROW

From this bird, whose glory is in its power, its wandering, and its fierceness—a terror to all around it, I wish to turn our attention to a little feathered favourite, familiar to all, except those who live in the squalor of our large towns—out of the world!—one whose habits of confidence bring his tiny brown form, flitting with the robin, to our very doors, to pick up the crumbs from the morning table-cloth. Always at home—for he does not wander, except into the fields at hand—the shrubs cover him, and the stick heaps shelter him. Amongst the first of the birds to herald the approach of the coming spring, when the sun comes out from behind the winter-mists, and all the air is bright, the hedge-sparrow, perched upon a spray or railing top, warbles out his short sweet melody—the early love-song—to his mate.

The bird is too familiar to need a special description. Everyone knows him, and even those who do not trouble to care for him, owe him no grudge. He does no harm to our gardens, and never fights with his fellows, like the robin. Simply dressed in his brown-mottled plumage, quiet and inoffensive in his habits, this little bird—"Shufflewing," as it is sometimes aptly called—is the very antipodes of an eagle.

The hedge-sparrow is pretty generally distributed throughout Europe, and stays with us the year round, becoming very tame in severe weather, and at that

season frequenting stackyards and farm buildings, where it seeks food from the stacks, and shelter in the outhouses, where it roosts at night. The hedge-sparrow begins to think of building its nest about the end of April. Some nest earlier. The usual site chosen for the nest is a thorn hedge, probably where the centre grows thick and stunted, from the hedge having been cut down some years before, or a solitary bush, if it be thick, will be chosen. Generally the nest is about a yard from the ground, sometimes more ; seldom less.

The foundation of the nest is generally composed of sticks—usually twigs from the hedge. The next layer consists of the bright green shoots of early spring moss. With this the cup-shaped hollow is formed, and the inside of this is lined with horse-hair of different shades, picked from gates and posts where horses rub themselves. The hollow is about two inches across, as round as if it had been struck by a compass, and the hair woven and interlaced—how dexterously !

I dare say there is not a boy here who is not anxiously waiting for the eggs so well known to him. Our nest was finished when we last saw it ; the place was marked so that we might know it again when we intended to return, in a week's time, on the next half-holiday. The place is found, and we carefully part

the branches—the leaves having come out more fully since the week before—and peep in, just in time to see the hedge-sparrow hop quietly off into the thicket and disappear. But what has she exposed to view—five eggs, of brilliant blue, yet soft and delicate, lying all warm in their downy bed, gleaming in lovely contrast with the green moss and the dry dead sticks; of colour and tint, which none but Nature's brush could paint, inimitably pure.

There is not a naturalist who has not felt a thrill of delight when looking at this lovely sight. And yet, how feebly does this still small voice of Nature speak to some, who would drag out the nest with ruthless glee; in doing so break half the eggs, and with the remainder either play at that degrading game of "hop-egg," or else pelt the eggs into the face of the nearest companion.

If you don't admire this beautiful structure, do not ruthlessly destroy it; and be assured that as you love and admire Nature's objects around you, so you will provide happiness for yourselves and a fitter and more agreeable companionship for those around you.

Hedge-sparrows' eggs in the nest are to my mind the most beautiful of all the eggs I know, without any exception, depending as they do upon the depth and purity of their blue.

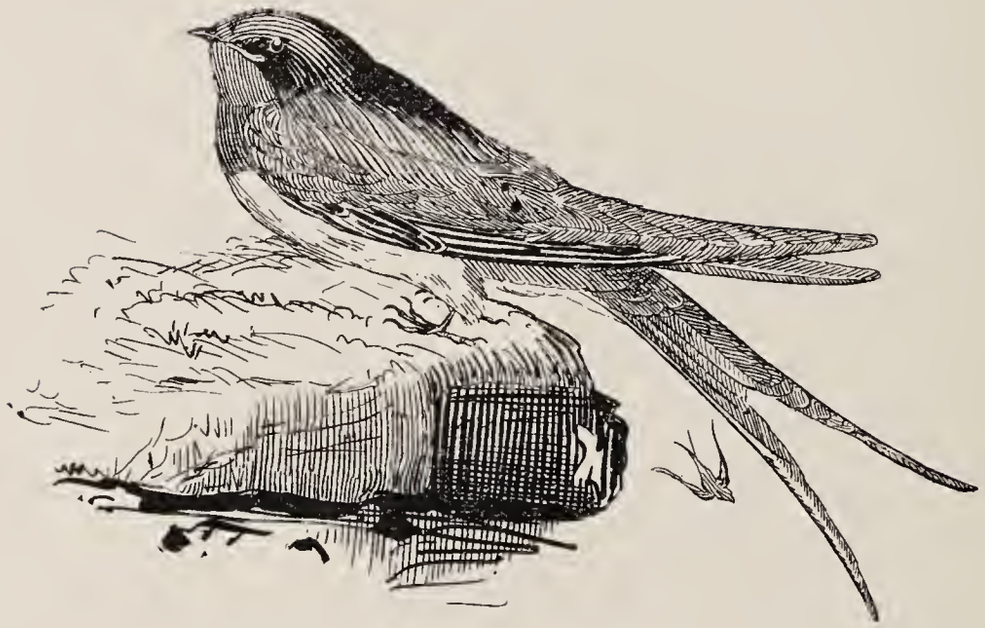
Unfortunately these eggs do not retain their best

colour when kept in a cabinet, but fade slightly, although this may be in a great measure checked by keeping these and all other eggs constantly in the dark, in a dry place.

The usual time, a fortnight, is taken for the sitting hedge-sparrow to hatch her eggs. It would be a great omission on my part were I not to mention that the cuckoo very frequently chooses the nest of this bird in which to deposit her egg.

One egg, as a rule, is found in a nest; when, however, two cuckoo's eggs have been discovered in one nest, it is supposed that they have been laid by different birds.

When the cuckoo's egg hatches with the young hedge-sparrows, you can well understand that Master Cuckoo will need much more food in proportion to his single mouth than several young hedge-sparrows. But Nature has provided a remedy. The young cuckoo, being slightly larger than the young hedge-sparrows, is provided with a depression in his back, and is endowed from birth with a strong instinctive desire to rid the nest of the young hedge-sparrows. He soon sets to work, and one by one he raises the birds on to his back, and topples them out of the nest to die of cold and starvation. So strong is this instinct that if a small stone or other foreign substance be put into the nest with a young cuckoo when first



SWALLOW.

hatched it will at once set to work to turn it out.

This desire leaves the cuckoo in a short time, as evidently it is only expected by Nature to occupy a day or two in clearing the nest for its own more bulky body. The hollow in the back soon fills up, probably with his generous diet—equal to what five young hedge-sparrows would have consumed.

The egg of the cuckoo is unlike the blue eggs of the hedge-sparrow, being rather longer, and of a light-grey coloured ground, freckled with brown spots, very like some light specimens of the eggs of the common skylark. Notwithstanding all this difference, the little birds take very kindly to their foster-charge, and it is not an uncommon sight in June to see a fully-fledged young cuckoo, in his beautifully rich mottled nest-plumage, sitting upon a stone wall or rock, waiting for the bird which has hatched and reared him to bring food to satisfy his greedy appetite.

And so we see what an interesting bird our simple brown hedge-sparrow is, providing us with enough natural history in his little life for many a lecture, enlivening our gardens and shrubberies, and living in the sweet bond of simplicity with all around him.

The swallow is equally familiar to you all, and quite as interesting in his wandering way as the hedge-sparrow was in his stay-at-home, quiet life.

"Have you seen a swallow yet?" will be, before many weeks are over, on many a lip, as with each succeeding day every new suggestion of the spring is eagerly looked for by those to whom each season renews its friendships and its joys from Nature's true society.

The first question which arises is, why does not the swallow stay in this country the whole year round? Simply because the insects upon which it feeds are driven to take shelter from the cold of winter, or are killed off by the early frosts.

Swallows used to be supposed to hybernate, that is, to sleep the winter through, in holes in banks, or in the mud at the bottom of ponds and ditches.

> "There their subaqueous refuge keep,
> And through the livelong winter sleep.
> 'Twere hard to think a form so light,
> So fitted for ethereal flight,
> So fit to quaff the upper air,
> Should to the wat'ry world repair,
> Successful try the steep descent,
> And breathe the grosser element."
>
> —Bishop Mant.

But this is not so. At the end of September, when the early frosts begin to come at night, large flocks of swallows may be seen congregating upon housetops, telegraph wires, or the dead branches of trees, as if they were holding council where to go and when to depart. They leave us suddenly, and make their

way to warmer climates, flying uninterruptedly by day and night across the sea, until they come to their warm winter quarters, where the supply of insect-food is unfailing. It is clear, then, that the swallow divides the year into nearly equal parts. This departure in the autumn (when all the trees are growing bare, and the heaps of eddying leaves suggest the chill winter winds) is memorial in our minds as the gloomy heralding of the dull, cold weather. It is natural, then, that his return should be so looked forward to as a signal from distant lands of the bright weather and the bloom of summer enlivened by his presence. At first only one or two swallows make their appearance; the large flocks return later, and it is probable that if sharp weather such as we have at the end of April comes, it compels the first arrivals to retreat southward until the climate is more genial and the wind more tempered. But why do our feathered friends return? there is no weather in the north of Africa to drive them home—no snow, no frost; why do they not stay there, where the sun is ever warm and the insect-food unfailing, where many of their race live as residents? And, further, why, on the other hand, do not those swallows whose home is there come as migrants to our shore?

I will suggest a possible solution. In ages long since gone by, there was probably a more genial

climate, with its summer and its winter nearly alike as regards temperature. When our Britain was joined to Europe, when lions and hippopotami, elephants, bears, and gigantic stags wandered in forests, or wallowed in reed-beds long since gone to decay; in that period of ages past, when animals which to-day only inhabit, in modified forms, countries beneath a tropical sun, may it not have been possible that the swallow, or his type, was a resident in these parts, and did not need to migrate?

It seems to me quite possible. But Europe was destined to undergo a great change in its climate. A period of extreme Arctic cold, such as exists in the northern parts of Greenland at this moment, a climate of perennial snow, and icebergs, and glaciers, or fields of moving ice, was ordained to envelop our country in its icy cold.

But nature never brings about great changes suddenly. By degrees, probably, the winters became colder, driving the birds, our swallows, to seek a warmer climate, where their insect-food abounded. Gradually it would become more and more necessary to migrate southwards. Century after century the cold increased, until only a few sheltered nooks were warm enough for the birds annually to return to. The instinct to migrate, would thus, of necessity, become ingrafted into the birds in the course of time. It

would become part of their inborn nature to seek warmer climes at the approach of winter. There was a time coming, however, when the snow would melt and the glaciers thaw from off those Yorkshire hills.

From distinct evidence we know that this did take place, and the swallow gradually reclaimed his ancient home, as by degrees the snow and ice retreated within the Arctic zone.

Why should our chimney swallow follow northwards this slow retreat, when England was again becoming a warm, temperate region ?

In all animated nature there is a ruling principle that creatures should return to their early home ; and can we not imagine that the swallow—probably never entirely driven from Europe, even during that period of intense cold called by geologists the glacial period—can we not suppose that, as the country partially returned to conditions of alternate heat and cold, that the swallow would instinctively return to the haunts where his ancestors had had their nests, actuated by the transmitted love of their ancient home ? You will see at once why the African swallow does not visit us too, as well as the English species—simply because he is African, and has never been obliged to quit his country at the approach of wintry weather. The African swallow remains at his home ; the English swallow returns to his, and in that return brings

brighter times for longing hearts, weary of the leafless trees, which sigh and moan in the wintry winds, all cheerless and dreary, longing for the balmy breezes scented with the fragrance, sweet from many a flower, the perfumed breath of heaven. From time immemorial this bird has been protected by mankind—there is not a race which does not respect and cherish it.

About the middle of May the swallow takes up its abode where it intends to make its nest; and it is quite certain that the same birds return to the same place to breed year after year. A friend of mine told me the other day that about the time of the year when the swallows were expected to return, a look-out was kept around a gentleman's house day by day, and when they appeared several persons hid themselves in a loft, the door of which had been kept closed during the winter, and was still shut. When these persons had secreted themselves, and all preparations were completed, the door was opened. In a very few moments several swallows flew twittering in, and at once flew up to two old nests situated upon the rafters, out of which the young had been hatched the summer before. After the swallows had inspected the nests, and twittered out their little glee, they flew in and out of the barn, as doubtless they had done numberless times the year before, well pleased that the

kindly gentleman had opened the door and let them into their old home.

The swallow's nest differs from the nests of nearly all other birds, except, of course, those closely allied to it, being built of mud, mixed with straw and fine hair to bind it together. The swallow generally supports its nest on a beam of wood, or slight projection from the wall, and builds it out from the wall in a half-circle, until the cup is sufficiently deep to hold the scanty lining of dried grass, covered by feathers and hair. On this the bird lays five or six eggs, the ground colour of which is clear white, showing the yolk through, which gives fresh eggs a pinky shade. The shell is more or less thickly spotted with dark-brown specks. It is interesting to watch the young swallows when they are about fledged, waiting and watching over the side of the nest for the parent birds to bring their insect-meal ; and how, in a few more days, the old birds entice the young ones to try their wings and fly out in their fluttering way for a short turn.

In a few days more the young venture to follow their parents, and may be seen flying towards them as they rise into the air to meet each other, and take the food upon the wing.

When the young are tired they may be seen sitting all in a row upon a dead branch, giving a short twitter and a shake of their wing as the parent bird passes

without the longed-for morsel. There are many more interesting facts I might tell you about the swallow, how in his migrations, after flying hundreds of miles, large flocks meet with a ship in their course, and have been known literally to heap themselves on each other when settling upon the rigging. After a short rest they would again wing their way to their far-off home.

But time flies as well as birds, and you and I must be satisfied if, on the one hand, I have been honoured by your careful attention, and you, on the other, have gained one tittle of the love and admiration for the works of Nature around you which I have endeavoured to stir up in your minds. There may be some who would say, I have not time to study and think about these things; besides, what is there of interest or instruction in a snail shell, or any weed, or a bird's egg; I have not fields and gardens, parks to preserve and enjoy. Believe me, it is not so. To every one who observes the sun's rising and his setting, who loves the flowers as they live, and the tints of the autumn leaves as they die; who knows the mosses that cover the gravestones, and the lichens which hang on the sickly trees; who watches the honey-gatherers on the flowers, and the birds in the fields,—to such a man every lane is his own, from his knowledge of its beauties, every park is his delight, for he has made it his own by the study of all that flourishes

within its walls; every bird which fills the woods with its song, sings to him for his delight.

Most of our greatest naturalists have proved my words. Thomas Edward, the Scottish naturalist, still living, whose love for nature is so strong that, notwithstanding that almost everyone resisted his efforts, almost penniless, and maintaining a large family most respectably in the Scotch town of Banff, not only without books or any guide save his own innate perseverance and love, he was able to discover new species of animal life never before known to science, and to far outstep the knowledge of ordinary naturalists by the diversity of his pursuits, all the time, as now, a working cobbler. Thanks to the generosity of our Queen, who read his life, written by Dr. Smiles, his country has shown its pride in such a man by providing him (before it was too late) with a yearly income. But his nature cannot be changed; for years he has worked upon his cobbler's stool, and there he prefers to remain, doing what little he can for the rest of his well-worn life. This is the life of a man, a naturalist of the highest order, to whom the whole of Nature's field was his home, roofed in by the vault of heaven.

It is not the abundance of opportunities which makes men great; it is the use they make of few advantages. It is not the confused mass of dry facts

which is being daily crammed into the undeveloped brains of our children which will make us a wiser nation. This can only be obtained by our energies being directed towards showing them what to love and what to care to learn; consulting always, as far as possible, a child's temperament and inclinations, and never forgetting that England's greatness, in a large measure, depends for its continuance, as it has had to be indebted for its rise, to the brains of early dunces. No great man ever got to the top of the tree of knowledge by any other than by steady progress, year after year; his care to learn following upon his gaining convictions that whatever he learnt anew was but a loophole admitting a flickering gleam of light into the dark night of his own ignorance, which could only be felt truly by the dim light of knowledge. It is this dim light which I have, in all humbleness, endeavoured to strike here to-night upon the tinder-box—Natural History—with the flint-stone of observation. It is not everybody who cares for birds, or stones, or shells, or butterflies, or flowers, but there is not one of us who can say, if he dare, that any object in nature is beneath his notice, even though it may be in itself ugly and uninteresting in comparison with what in the scale of beauty is more lovely and admirable. It is but a part of one harmonious whole; a silent proof of the great Creator's powers, as incom-

prehensible when exerted in the creation of the meanest worm that crawls in the dust beneath our feet, as it is in the vast ordination of myriads of worlds displayed to our eyes in the starry heavens, illimitable and inconceivable.

I hope you will go home to-night, after what I have said, with the feeling that there is a great deal around you which may make your life more agreeable and pleasanter. Whatever branch of natural history you take up, it will lend enjoyment to your trips, and solace to your rambles. You will never be alone, for nature is ever present and around. One thought about what is beautiful will raise you above what you were before that thought occurred.

Let parents encourage and guide their children in the observation of nature. If we take two homes, one with flowers growing about it, well cared for, and another without a green leaf, except the weeds growing upon the neglected path,—under which roof would you say rests the kindlier heart? There is no need for me to say; the question suggests its own answer.

In concluding, let me repeat to you the beautiful words of one of our best and greatest men, Professor Ruskin. "We complain of the want of many things —we want votes, we want liberty, we want amusement, we want money. Which of us feels or knows, that he wants peace?

"There are two ways of getting it if you do want it. The first is wholly in your own power: to make your selves nests of pleasant thoughts. Those are nests,* on the sea, indeed, but safe beyond all others; only they need much art in the building. None of us yet know, for none of us have been yet taught in early youth, what fairy palaces we may build of beautiful thoughts, proof against all adversity. Bright fancies, satisfied memories, noble histories, faithful sayings, treasure houses of precious and restful thoughts—which care cannot disturb, nor pain make gloomy, nor poverty take away from us—houses built without hands for our souls to live in."

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* The ancients imagined that the halcyon built its nest upon the sea when the waters were smooth and at rest. The halcyon thus became an emblem of peace, and seasons of fine weather were called halcyon days:—

" . . . by the halcyon day
Allur'd in joyousness to stray,
Where Malvern's beacon-crested crown
Here looks on ridgy woodlands down."—Bishop Mant.

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